

**BEAD BOUND COMBINATORIAL OLIGONUCLEOSIDE PHOSPHOROTHIOATE AND
PHOSPHORODITHIOATE APTAMER LIBRARIES**

ABSTRACT

5 [0115] The present invention includes composition and methods for making and using a combinatorial library having two or more beads, wherein attached to each bead is a unique nucleic acid aptamer that have disposed thereon a unique sequence. The library aptamers may be attached covalently to the one or more beads, which may be polystyrene beads. The aptamers may include phosphorothioate, phosphorodithioate and/or methylphosphonate linkages and may be single or double stranded DNA, RNA or even PNAs.